

Brandon Beamer M.D - **Orthopedic Sports Medicine Specialist**



5317 Golden Foothills Parkway
El Dorado Hills, CA 95762

Ph: 530-344-2070 / Fax: 530-748-0332 / www.brandonbeamermd.com



Notes:

**This protocol is designed to serve as a guide for the rehabilitation process. It is not intended to supersede clinical judgment and decision making. Progression through each phase is designed to allow for maximal tissue healing of repaired tissues and is based on scientific evidence and clinical experience*

Estimated Return to Sports / Work :

Criterion for Progression:

- 1) Minimal to no edema/effusion
- 2) Knee ROM 0-90 degrees by week 6
- 3) Full patellar mobility
- 4) No extensor lag with SLR
- 5) Ambulate on level surfaces without brace with quad control

Phase III – Tissue Remodeling/Hypertrophy Phase (week 9-18)

- Goals:**
- 1) Full knee AROM
 - 2) Improve eccentric quad control
 - 3) Initiate advanced SL proprioception activities and lateral motion
 - 4) Strength progression
 - 5) Begin light jogging week 16

- ROM:** ROM to full
Exercise: Initiate lateral motion
Single limb balance with perturbations
CV Exercise: Initiate jogging by week 16

Criterion for Progression:

- 1) No effusion
- 2) Full ROM
- 3) 20 reps to 60 degrees single Leg squat with eccentric control and good lower extremity alignment
- 4) Quad strength >80% of uninvolved LE (10RM single leg press or isokinetically if available)
- 5) Jogging without pain or antalgic gait

Phase IV – Sport Specific Training (week 19-24)

- Goals:**
- 1) Begin sport specific drills – No cleats or contact
 - 2) Normalize neuromuscular control
 - 3) Normalize jumping/landing mechanics if indicated
 - 4) Prepare for return to sport

- Exercise:**
- Progress on running progression
 - Begin agility progression
 - Begin plyometric progression
 - Progress on sport specific training
 - Swimming – initiate whip kick/breast stroke (week 24)
 - Cutting sports and Golf (week 24)

Criterion for Return to Sport: (Recommend combination testing of strength, agility, and power according to available resources/clinic setting)³

- 1) No swelling or pain
- 2) Quad strength > 90% of uninvolved (10RM leg press or isokinetic testing)¹²
- 3) IKDC (MCID 6.3 @ 6mo; 16.7 @ 12 mo)^{2,4,5,16}
- 4) Confidence Question¹⁷

Brandon Beamer M.D - *Orthopedic Sports Medicine Specialist*



5317 Golden Foothills Parkway
El Dorado Hills, CA 95762

Ph: 530-344-2070 / Fax: 530-748-0332 / www.brandonbeamermd.com



MPFL Reconstruction/Proximal Realignment

Weight Bearing

- NWB x _____ wks
- TDWB x _____ wks
- PWB _____% x _____ wks
- WBAT
- Brace Locked in Ext x _____ wks

Brace

Brace : _____ weeks

With Sleep: _____ weeks

ROM

- Full ROM
- Locked full ext x _____ wks
- Locked at _____° x _____ wks
- ROM limits
- _____° to _____° x _____ wks
- _____° to _____° x _____ wks
- _____° to _____° x _____ wks
- _____° to _____° x _____ wks

CPM

- _____° to _____° x _____ wks
- 30-70° ↑10°/d @ dir
- None

Recommended Clinical Guidelines

- WB:** TDWB x 1 week
WBAT week 2
- Brace:** Locked at 0 degrees
ext x 6 weeks with
ambulation
- ROM:** 0-30 week 1-4
0-60 week 5
0-90 week 6

Precautions

Phase I -Tissue Protection/Healing Phase (0-4 weeks)

- Goals:** 1)Reduce pain
2)Reduce effusion
3)Minimize scar adhesion formation
4)Achieve full knee extension ROM
5)Facilitate quadriceps activation
6)Protect from excessive patellar lateral stress or genu valgus stress

ROM: PROM/AAROM/AROM (0-MD prescribed limit)

Exercise: Multiangle Quad Isometrics (per ROM limits)^{1,3,13,29,35}
SLR abd/add/ext (brace locked)^{19,30,31}

Calf Raises

Single Limb Stance¹⁹

Manual: Patella Mobilizations (caution lateral glide)^{19,34}
Soft Tissue Mobilization patellar tendon^{19,34}

Modalities: Functional Electrical Stimulation (not directly on
VMO)^{3,5,6,26-28}

Biofeedback³⁶

Cryotherapy^{4,5,18,23,24,37}

Criterion for Progression:

- 1)Voluntary quadriceps isometric contraction
- 2)Full knee extension AROM
- 3)Knee ROM 0-30 degrees

Phase II – Tissue Proliferation Phase/Progression Phase (5-8 weeks)

- Goals:** 1)Pain and edema control
2)Minimize scar adhesion formation
3)Improve knee AROM
4)Strength progression - develop function quad control
5)Normalize gait pattern

ROM: ROM (0-MD prescribed limit)

Exercise: SLR flexion (brace locked)³
Sidelying hip abd/ER^{8,15,16,30,31}
Wall Sits (30 degrees)^{1,3,11,19}
WB Terminal Knee Extension (30-0 degrees)²²
Open Chain Knee Ext (90-30)^{3,12,32}
Open Chain Knee Flex (0-90)
Closed Chain knee flex/ext (80-0)^{3,12,13,22,32,33}
Step up/down¹¹

Balance Board/Wobble Board (Bilateral)

Manual: Initiate Scar Mobilization^{2,14}

Modalities: Patellar taping - medial glide^{8,20,21}

CV Exercise: Bike, Elliptical, Stair Climber (ROM permitting)
Swimming – Flutter Kick only